

Best practices for urban local food entrepreneurs and building regional Extension networks

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Abstract

Interest in local foods production in the urban environment has been steadily increasing in North Dakota and the surrounding region. Food entrepreneurs are seeking safe and reliable ways to grow, create, and market their fresh or freshly preserved products. Urban consumers are demanding local foods and food products that are fresh and safe. As an increasing number of producers and vendors enter farmers markets and other local food sales channels, these growing small businesses need technical assistance for safe food handling and marketing in the changing world of pandemics and supply chain issues. Although some basic practices, such as hand washing, have been encouraged for decades, the pandemic has shown that they are in constant need of reinforcement. Regulations for small-scale food entrepreneurs vary widely from state to state and can be confusing for both entrepreneurs and consumers. This lack of clarity is an ongoing issue, so a best practices document was created and disseminated throughout the North Central Region. The North Central Food Safety Extension Network (NCFSEN) has been building a coalition of Extension food safety professionals in our region since 2016. We have implemented several activities together, including monthly meetings, building relationships with industry professionals, developing educational materials, and creating a program evaluation tool for our region. Our network also has been working steadily to help other regions establish their own Extension coalitions to better serve their constituents as developed around a particular topic, such as food safety in our case. To that end, we have assembled best practices for creating regional Extension networks. The following elements were presented at the conference: 1) background of cottage foods in our region, pre- and post-pandemic; 2) best practices for local food entrepreneurs, including the relevance of “best practices” in view of varying state laws and regulations, health and hygiene policy for employees, volunteers, and family members, market day preparations and contingencies, creating, labeling, and sampling value-added food products; 3) evolving practices for pandemic circumstances in urban markets; 4) building regional Extension coalitions to better serve local constituencies; and 5) best practices for implementing your own regional Extension network, including benefits of regional collaboration, organization, communication, and setting goals.

Keywords

collaboration, cottage, farmers, markets, pandemic

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Abstract

Interest in local foods production in the urban environment has been steadily increasing in North Dakota and the surrounding region. Food entrepreneurs are seeking safe and reliable ways to grow, create, and market their fresh or freshly preserved products. Urban consumers are demanding local foods and food products that are fresh and safe. As an increasing number of producers and vendors enter farmers markets and other local food sales channels, these growing small businesses need technical assistance for safe food handling and marketing in the changing world of pandemics and supply chain issues. Although some basic practices, such as hand washing, have been encouraged for decades, the pandemic has shown that they are in constant need of reinforcement. Regulations for small-scale food entrepreneurs vary widely from state to state and can be confusing for both entrepreneurs and consumers. This lack of clarity is an ongoing issue, so a best practices document was created and disseminated throughout the North Central Region. The North Central Food Safety Extension Network (NCFSEN) has been building a coalition of Extension food safety professionals in our region since 2016. We have implemented several activities together, including monthly meetings, building relationships with industry professionals, developing educational materials, and creating a program evaluation tool for our region. Our network also has been working steadily to help other regions establish their own Extension coalitions to better serve their constituents as developed around a particular topic, such as food safety in our case. To that end, we have assembled best practices for creating regional Extension networks. The following elements were presented at the conference: 1) background of cottage foods in our region, pre- and post-pandemic; 2) best practices for local food entrepreneurs, including the relevance of “best practices” in view of varying state laws and regulations, health and hygiene policy for employees, volunteers, and family members, market day preparations and contingencies, creating, labeling, and sampling value-added food products; 3) evolving practices for pandemic circumstances in urban markets; 4) building regional Extension coalitions to better serve local constituencies; and 5) best practices for implementing your own regional Extension network, including benefits of regional collaboration, organization, communication, and setting goals.

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INTRODUCTION

The pandemic-affected, digitalized world comes with challenges, but also opportunities to establish and connect disparate urban environments within regions. Supply chain issues have led to more localized solutions for access to food, creating a need for best practices guidance for cottage food industries. To better serve this new and evolving pandemic-affected reality, Extension groups may be developed and nurtured to coalesce around a common topic to reach the maximum number of constituents and disseminate current and up-to-date research.

The North Central Food Safety Extension Network (NCFSEN) is a 6-year and counting collaboration among Extension food safety professionals from 12 states of varying academic and county ranks that developed around the topic of food safety and initially, home food preservation. The group was founded in 2016 at a meeting in Chicago convened by North Central Region family and consumer sciences program leaders. Four years into the collaboration, the group found itself in a unique position to advise, protect, and educate consumers dealing with new issues of food safety as affected by the new SARS-CoV-2 pandemic. The initial accomplishment of the NCFSEN was the development of a common evaluation survey tool to assess pre- and post-programmatic success in

consumer food preservation outreach (Garden-Robinson et al., 2019). The award-winning tool may be used with any type of Extension consumer food safety/preservation programs across the region.

The NCFSEN has also explored and evaluated its own group's formation, operation, and achievement through a qualitative study that resulted in a number of key discoveries that led to a journal article (Garden-Robinson et al., 2021b) and a series of best practices "handouts" (Garden-Robinson et al., 2022) aimed at Extension professionals in other states and regions. It is hoped that all Extension regions across the US will develop into vibrant professional communities that may deliver programming efficiently to constituents in a sometimes-chaotic pandemic-affected and social media disinformation environment.

Finally, the NCFSEN developed best practices for local food entrepreneurs and farmers markets for the North Central Region to help solidify and reinforce safe food handling practices for pandemic times and into the future to serve increasingly urbanized local food markets (Garden-Robinson et al., 2021a). From growing and harvesting to packaging and selling on market day, food safety in the local supply chain is an area of public health that is an ongoing concern to make sure people have access to safe, nutritious, and fresh foods created in their own communities.

DISCUSSION

Cottage foods in the North Central Region

As cottage foods started to become popular in local foods movements, a growing interest emerged by Extension educators in understanding the rules in the North Central Region. According to the Association of Food and Drug Officials (AFDO), a cottage food operation is "a person who produces cottage food products only in the home kitchen of that person's primary domestic residence and only for sale directly to the consumer. A cottage food operation shall not operate as a food service establishment, retail food store, or wholesale food manufacturer" (AFDO, 2022). These operators create cottage food products that are non-potentially hazardous, such as baked goods, jams, jellies, and other non-potentially hazardous foods. The NCFSEN would often discuss these operations and the training and resources available, observing that each state had its own specific rules. Potential cottage foods vendors often forwarded questions to state Extension specialists about rules not only in their own locales but also in neighboring states as they were planning to sell food across state lines.

The North Central Region (NCR) Center for Food Safety Modernization Act (FSMA) Training, Extension, and Technical Assistance developed tools about value-added food products to assist in these conversations. Specifically, tools were developed in the cottage foods area to address fermented foods, jams, jellies, and pickled vegetables. These tools are located on the resources tab on their website (NCRFSMA-a, 2022). The tool is updated often to reflect continuing change in rules, regulations, and laws. The NCFSEN website links to the NCR FSMA tools to keep up to date.

One set of products usually at the center of the cottage foods discussion is fruit jams, jellies, preserves, and fruit butters (NCRFSMA-b, 2022). This NCR FSMA document outlines that each state has specific rules related to types of these products and where they could be sold, along with general requirements for labeling. However, Iowa, Kansas, and Minnesota have standards for testing specialized products, such as those containing peppers and other non-fruit products. In contrast, Michigan and Nebraska require that specialized products are prepared in licensed facilities.

Recently, fermented foods and pickled products have become hot topics for urban and rural cottage foods producers and were subsequently addressed by the NCR FSMA document database (NCRFSMA-c, 2022; NCRFSMA-d, 2022). Specifically, several states in the Region have a "Pickle Bill," which allows the home processor to make and sell pickled products from their home. For example, Minnesota has specific requirements that the vendor must register with the state and complete food safety training to sell pickles from their home. There is a sales limit per year, and their product must be tested (MN Dept of Ag, 2022; MN Legislature, 2022). The state of Wisconsin

also allows the sales of pickles from a home processor, with similar sales limits and testing requirements (State of Wisc., 2022). The national Food Freedom Act model “Food Freedom” bill, which has been enacted by some states, also expanded the options of what products could be sold at residences and farmers markets (Institute for Justice, 2022).

These changes have led to a workgroup within the NCFSEN to begin to collaborate on resources and webinars that would be beneficial for cottage food operators and small food processors. The workgroup hosted its first webinar series in the fall of 2022 (ISU, 2022) and plans to continue to collaborate and build resources that will support small scale food entrepreneurs in both urban and rural areas throughout the North Central Region.

Best practices for local food entrepreneurs

Many entrepreneurs have contacted members of the NCFSEN looking for ways to expand their personal economic food selling enterprises in both urban and rural areas. Beginning in 2020, pandemic issues led to changes in economic conditions and changes in dining habits. Grocery shelves were sometimes empty in many stores. Many documented changes in food spending occurred during the pandemic, according to data from the USDA Economic Research Service (ERS, 2022). Food spending away from home dropped from \$79 billion in February 2020 to \$42 billion in April 2020. Food insufficiency became an issue, with a peak of 13.4% in December 2020, which dropped to 11.5% in 2022 (ERS, 2022). Many people rediscovered cooking at home, and others took up gardening, which was found to reduce stress while providing food for families and the community (Cortez et al., 2022).

The NCFSEN developed a best practices publication to guide entrepreneurs in the development and sales of safe food products (Garden-Robinson et al., 2021a). As highlighted during the pandemic, health and hygiene practices are critical for avoiding the spread of harmful microorganisms. The guide promoted food safety among workers, interns, volunteers, and visitors to food operations. Establishing health and safety policies with ongoing training is critical regardless of the size of the operation. In addition, records for health practices should be maintained.

Proper handwashing is key, and the guide includes a resource to develop a portable handwashing station, which is a best practice when sinks are not available. Worker illness can spread disease, so the guide promotes awareness of localized public health guidance related to food handler health. Handwashing is critical when handling food at the time of sales. Money-handling is also a food safety risk. Hairnets or other hair restraints worn by food workers are also promoted.

Many people like to “try before they buy” food items. However, food sampling can become a food safety issue. Therefore, avoiding cross-contamination and maintaining temperature control (keeping food below 40 degrees Fahrenheit or fully cooked items above 140 degrees Fahrenheit) is critical. This can be achieved by providing samples when you have sufficient traffic to avoid allowing food to sit too long. Cut produce should be maintained cold and trash containers should be readily available.

Maintaining clean, sanitized equipment is another important aspect of food safety for entrepreneurs during sale days. The process of washing, rinsing, sanitizing, and air-drying should be followed. Sanitizing solutions must be made according to the manufacturer’s guidance, and test strips should be used to test sanitizing solutions.

Entrepreneurs should be aware of “Time and Temperature Controlled for Safety” (TCS), also known as “potentially hazardous” foods and the specific guidance provided by federal, state, and local agencies. For example, the temperature of cut produce and foods eaten raw must be carefully monitored. In many areas, baked goods such as cookies and bread, dehydrated fruits and vegetables, dried herbs, granola, and nuts are not considered TCS foods and thus are more likely to be allowed to be sold legally when made in a home kitchen.

Entrepreneurs may develop products from raw ingredients that they grow or purchase. They may wish to develop canned, dried, or otherwise preserved foods. Others may want to sell eggs or

sausage made from livestock they raised. In all these cases, state and local guidance should be sought. Extension agencies can provide research-tested food preservation formulations and guidance.

When food is displayed, safe methods must be used. Food should be packaged and transported in clean, sanitized containers. For example, large baskets lined with single-use food grade plastic can be used. Stainless steel or other food-grade containers that have been washed and sanitized can be used. Handwashing remains crucial when handling foods during display.

On market days, food safety best practices must be in effect. Care must be taken to avoid cross-contamination through the implementation of proper hygienic practices by workers and maintenance of clean, organized spaces. All cut produce should be wrapped and refrigerated.

Small businesses need to be aware of food labeling requirements in their municipality. In some cases, labeling requirements are minimal, especially for cottage food producers. Following the guidance of the Food and Drug Administration is a best practice, but cottage food producers usually have an abbreviated list of requirements, which varies by location. For example, listing the product name, company name and address or other contact information, as well as a website is a best practice. Listing all the ingredients in descending order by weight is required on processed licensed foods but may not be required for cottage food producers in every state but is still a best practice. Listing allergens (wheat, milk, nuts, etc.) is a best practice and is considered a key point of communication with consumers. Although Nutrition Facts labeling is not legally required unless businesses reach a threshold sales level or if the producer makes a health claim on the food label, many consumers want this information.

Finally, knowing resources within and beyond Extension agencies is important. The guide provides numerous resources used by Extension personnel in NCFSEN. These resources may be helpful to entrepreneurs developing new products and/or expanding their current product line and market.

Pandemic-related food safety changes

The phrase “wash your hands” became very prevalent with the onset of the COVID-19 pandemic and continues to this day. To some, it seemed to be a new concept although handwashing should always be second nature and done many times a day. For Extension food safety educators, this phrase is mentioned often. Handwashing is the first step in preparing safe food and to prevent other health issues. All consumers, urban and rural, can benefit from this important 20-second practice.

Food service operations from small to large, rural to urban, struggled to stay in business, particularly starting in March 2020. Many had to close their doors temporarily or permanently due to lack of business or lack of employees. Some were able to strengthen their ability to provide online orders for consumers to pick up and others were able to start that form of business. But there were still safe food handling practices to consider. There has been no evidence that COVID-19 was directly transmitted via food, but food handlers still had to use safe practices to ensure the safety of the food.

The COVID-19 pandemic created many challenges in food safety. In many urban locations, consumers working from home realized they had the opportunity to plant their own gardens. The result of harvesting the produce was that many wanted to also preserve their food at home. This not only created a shortage of food preservation equipment and supplies (such as canning lids), but also many people who lacked the knowledge and experience to preserve food safely. Two of our NCFSEN partners, Michigan State University (MSU, 2022) and University of Nebraska-Lincoln (UNL, 2022), created series of online classes for people to learn about home food preservation from their own home and computer. Other Extension programs outside the North Central Region were also successful in transitioning to an online format. These courses became very popular across the United States and even in other countries. The NCFSEN also created nine social

media graphics to give simple food preservation messages about key food safety tips for safely preserving food (NCFSEN, 2022).

Social media became the “go-to” resource for many consumers, but the information was found to be inaccurate with unsafe information and practices. NCFSEN Facebook data from April 2020-August 2020 showed that NCFSEN resources garnered a total of 17,762 people reached, with 1,100 engagements, 301 reactions, 27 comments, and 160 shares. The Network continues social media outreach across the North Central Region, even as the pandemic turns to endemic status, because outbreaks, new strains, and future viruses are bound to spread.

Building regional Extension coalitions

As an ongoing regional coalition of Extension professionals, the NCFSEN has strengthened their ability to serve their respective local constituents. At the beginning of its formation, however, the Network had its own reasons for forming: to share strengths and make connections, for mutual support and mentorship, the ability to be more flexible through informal organization, and of course, the benefits of collaboration in programming, publishing, and presenting at conferences (Garden-Robinson et al., 2022). A few studies conducted in recent years have shown the benefits of regional Extension collaboration, and research is ongoing to discover not only the variety of ways these collaborations are taking place, but also how expanded and improved program delivery can be, especially in urban areas as the pandemic continues to place pressure on supply chains.

For example, as a team focused on the topic of food safety, the NCFSEN had many challenges with the increased interest and practice of home gardening and subsequent home food preservation. Within the area of home food preservation, consumers were especially hard hit by the disrupted supply of tested and approved canning lids and rings. Those challenges were exacerbated by the rampant and prolific social media disinformation around expedient, but unsafe, alternatives for home food preservation and canning. Having a large, regional network of Extension professionals for support and information-sharing as well as the development of new program materials was beyond helpful in meeting the needs of constituents.

Best practices for building a coalition

The NCFSEN published a series of three fact sheets for Extension professionals across the United States to assist with building their own networks and coalitions (Garden-Robinson et al., 2022). It is desired and hoped that with strong regional Extension groups, collaboration can take place on a national level; indeed, the Network has already begun consulting and networking with other states outside of the North Central Region that wish to form their own groups. The Network has been a guest at other states’ monthly meetings as well as has guest speakers from other states come to visit at their own meetings to exchange information and build coalitions.

The first handout developed asks the “why” of regional groups, addressing the motivational factors for creating and joining a professional Extension collaboration. The second handout in the series outlines best practices for getting a group started, and includes the nuts and bolts of basic organization, such as goal-setting and regular meeting protocols. Basically, because of the informal tone of the working practice of Extension professionals, goals are not expected to be explicit, but imply that the intention is to work together, share and develop resources, and support each other in daily work.

Regular meeting protocols develop and will ultimately lead to forming smaller workgroups organized around more specific topics. Networking is encouraged not only outside one’s own region with other Extension professionals, as mentioned, but also by inviting stakeholders and commercial partners to meet and collaborate. For example, the NCFSEN has a strong relationship with Newell Brands, who manufacture the Ball brand lids and rings for home canning. After the Network became more settled, the group members moved into promotional activities such as branding and maintaining an updated website (NCFSEN, 2022).

The third handout of the best practices trio deals solely with communication strategies for regional groups. Although much advice is available in the general literature for group communication on all levels, the information provided in the handout is based on specific best practices discovered in the Network's own recent research (Garden-Robinson et al., 2021b). Basically, communication is conducted informally and weekly through email, sharing resources, developing webinar opportunities, and professional conferences along with helping each other field consumer questions with science-based information. Communication also is practiced during general meetings as well as with the smaller workgroup meetings, and through encouraging each other to participate by personal invitation to work on projects together or simply share in professional development with collaborative papers and conferences.

CONCLUSION

The NCFSEN has worked diligently since 2016 to develop a strong regional Extension network. This coalition building was particularly important for the large changes that took place in our world due to the COVID-19 pandemic. The pandemic heavily affected urban, as well as rural, food systems and thus provided new opportunities for local food entrepreneurs. The Network worked together to provide accurate, science-based information to these urban and rural food entrepreneurs to help them navigate the food safety regulations in their area, as well as to help them implement food safety best practices to provide safe local food to urban and rural consumers. The resources developed by the Network are available for other regions to utilize as well and is continuing to develop additional food safety resources and training opportunities in multiple formats for urban and rural food entrepreneurs and consumers to adapt to the needs of a changing world.

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